ORGANIZATIONAL CULTURE AND MEANINGS IN TENSION: AN ANALYSIS OF THE ALASKA VOLCANO OBSERVATORY

By

Shelly Lisa Worley

RECOMMENDED:

Robert B. Arundale

Pamela M. Wheeler

Jim Brown
Advisory Committee Chair

Jim Brown
Department Head

APPROVED:

John L. Seyler
Dean, College of Liberal Arts

Dean of the Graduate School

4-18-00
Date

ORGANIZATIONAL CULTURE AND MEANINGS IN TENSION: AN ANALYSIS OF THE ALASKA VOLCANO OBSERVATORY

A

Thesis

Presented to the Faculty

Of the University of Alaska Fairbanks

in Partial Fulfillment of the Requirements

for the Degree of

MASTER OF ARTS

By

Shelly Lisa Worley, B.A.

Fairbanks, Alaska

May 2000

Abstract

The Alaska Volcano Observatory (AVO) is an organization that is responsible for observing volcanic activity in Alaska and surrounding regions. This organization has a great impact on the public and agencies in Alaska because it is responsible for ensuring the safety of many Alaskans, and to many people who live in neighboring regions. AVO is not only responsible for saving lives, but also responsible for notifying agencies that depend on this organization for volcanic crisis notification.

This study is an ethnography of the Alaska Volcano Observatory and through interpretation of my data as research tool, I provide a sense of place for this organization. Detailed journals of my experience as a member of this organization have been analyzed to understand the culture of the place. This organization's culture intrigues me because I was once a dedicated member and have overcome challenges in this organization that I will remember for the rest of my life.

Table of Contents

Preface

"I dreamed the other night of music boxes hidden all over my garden. I think of us as all music boxes-beautiful and full of music. . . especially when we open up.
-- a quote by Sark

As a Geography undergraduate student, I had an interest in learning about my environment and about cultures that were very different from my own. My interests evolved into the discipline of Volcanology due to experiencing the Mt. St. Helen's eruption as a child. My interest in volcanology compelled me to study at the Alaska Volcano Observatory, but as a member of this organization, I realized my interests in volcanology were not of how volcanoes erupt, but as being an observer and an admirer of such an amazing phenomena. I was compelled to look at the whole picture in a volcanic eruption and not just integral parts of a volcanic system. After realizing what an observant person I was, I found that my interests as a volcanologist had shifted and I was more interested in human interaction and how this interaction affected volcanic hazard response. The Department of Communication gave me the guidance in pursuing a Master's degree that reflected my interests as a person. Conducting this thesis has been one of the most challenging tasks I have

experienced in my life, but I know I would not be the same person without accomplishing such a goal. I have put a tremendous amount of dedication into this research and I find it gratifying to share my experience with others.

This study was made possible with the support and encouragement of many people who have made a big impact on my life. Thank you Dr. Terry Keith for supporting me as a member in the Alaska Volcano Observatory. I always perceived you as a mentor and I thank you for believing in me. I cherish the fact that you recognized I was a dedicated member to the organization. Thank you Terry. I will never forget the first time I walked into Dr. Jin Brown's office for guidance. I was a confused graduate student who was eager to learn, but I had no idea where I belonged due to my unique interest involving the combination of human interaction and volcanology. Thank you Jin for finding a place where I belong as a researcher. I thank you for your dedication and your support throughout my Master's experience. Your insight and advice will not be forgotten. Thank you Dr. Pamela McWherter for your insight and enlightening me on my gender related experiences. It was you who let me see that writing is a very powerful tool if you can express how you feel through words. Thank you

Pamela. To Dr. Bob Arundale, thank you for your support and encouragement throughout my graduate career. You always were a good listener. Thank you Sarah, Keli, and Dianne for being there to listen to me when research and writing became stressful. If it wasn't for you, this project would have been more difficult to complete. Thank you. Most of all, thank you to my parents for your support. Your encouragement and love was what gave me enough strength to finish this graduate degree. You believing in me, loving me as a person, and as your daughter are the most appreciated gifts you could ever give me. Thank you for giving me the tools to be who I am. Mom and Dad, thank you and I love you.

Chapter 1

Introduction

The Alaska Volcano Observatory (AVO) is a multi-agency organization responsible for monitoring volcanic activity and notifying neighboring agencies of a volcano's status. In Alaska, there are over 80 volcanoes responsible for at least one major eruption a year. Due to AVO's social importance in informing public agencies about volcanic activity, there is a significant need for effectiveness in intra-organizational communication. Communication "plays an important role not only during crisis times, but also in the long term relationship between society and volcanic process" (Munoz,1996, p. 3). According to Munoz, "volcanologists and especially head personnel of observatories need to educate themselves in social and communication aspects in order to effectively communicate their findings with community decision-makers and the community itself" (p. 2). Science being conducted at the observatories, including AVO, is not maximizing its productivity if the organization does not recognize the need for improving its effectiveness in internal and external communication. There is a need for a communication analysis because it is clear that

"researchers from the natural sciences. . . often disconnect themselves from the community" (Munoz, p. 3). The goal of this research is to study the AVO's intra-organizational communication to understand the organization's culture, and to determine how organizational cultural matters impact organizational communication.

The Setting

In 1988, AVO was established to provide an organization dedicated to the monitoring and research of Alaska volcanoes. This cooperative effort involved the United States Geological Survey (USGS) Volcano Hazards Program, the University of Alaska Fairbanks Geophysical Institute (UAFGI), and the Alaska Division of Geological and Geophysical Surveys (ADGGS) (UAFGI et al., 1988). The Memorandum of Understanding (MOU) is the legal document that binds these three organizations together, directing their focus to similar goals. The MOU was implemented to "provide a shared use of data and facilities, and participation in the decision making process between the parties" (MOU,1988, p. 3).

Because the two offices of the AVO have synonymous representation of disciplines, the interaction between the two offices has also evolved. Discipline specific groups

(e.g. satellite monitoring) include members from both offices who ostensibly share information about volcanic phenomena. Emails and an occasional phone call represent the everyday interaction between the two offices, therefore minimizing the face-to-face, interpersonal interaction between members.

The two offices have groups of scientists from the disciplines of geology, seismology, and remote sensing. The reason for incorporating the UAFGI with the USGS in the production of AVO was to create an organization that maximizes every possible resource, such as expertise in the disciplines and the availability of technology, as well as to maximize funding potential for keeping the scientists employed and the research projects going. UAF is the oldest and most established University in the state. Prior to the establishment of AVO, Fairbanks (UAFGI) and Anchorage (USGS) geologists were focused on volcanoes in the Cook Inlet region, but the union of these groups provided more funding, allowing them to venture farther from Cook Inlet.

AVO's Beginning: A Mission for the Organization

The eruption of Mt. St. Helens was marked as a new era for volcanic hazard awareness in the United States. Due to that eruption and the number of people subjected to its

hazards, funding was increased dramatically for volcano research and funding at the Cascades Volcano Observatory (CVO). At the time in Alaska, there were only a few geologists from the USGS working in Anchorage and some work was on-going at the Geology and Geophysics Department at the University of Alaska Fairbanks. Anchorage was aware of Fairbanks doing some volcanology work. In Anchorage, scientists were tracking from a few seismic stations that had been located on selected volcanoes in Cook Inlet, but the Aleutians were still a distant goal.

The geologists in Anchorage, as well as their Fairbanks counterparts, were aware of the numerous volcanoes in Alaska and knew that an observatory would be the most efficient way to study Alaska's volcanoes and to provide a primary source of crisis information in the state about volcanic activity. The first step in creating the observatory was to encourage the USGS to recognize the need for an observatory in Alaska. The USGS was hesitant because funding from the Mt. St. Helens eruption was starting to level off and that agency was hesitant about starting an Alaska observatory. The observatory would have to "find funding for such an organization after money from the Mt.

St. Helens eruption ran out" (personal communication, June 1999).

Attention was given to the State and to the University of Alaska Fairbanks because John Davies, the first Coordinating Scientist, and others were doing work involving Cook Inlet volcanoes in association with USGS volcanologists. The University's facilities, extra staff, and its ability to lobby were other positive factors for incorporating the University into the volcano observatory effort. The director of the Geophysical Institute (GI) wanted to be involved in AVO in an attempt to revive the decaying Solid Earth program at UAF, the director's promise before being offered the position as the director of the GI (a long time AVO geophysicist, summer 1999). With the State, ADGGS, and the USGS involved in the proposal for AVO, the organization was established. Funding was very scarce, but enough was acquired to slowly piece the organization together.

The MOU as the founding document directs attention to funding issues under implementation procedures. The MOU states, "Should the USGS determine that it has the authority and desires to provide funding to either State party for the stimulation and support of earth science

research objectives at AVO, such funding would require the execution of a grant or cooperative agreement. . . conversely, if either State agency has the authority and desires to provide funding to the USGS to support the AVO, a 'joint funding agreement,' . . . will be executed by both parties" (MOU, 1988, p. 3).

The current AVO continues to consist of two offices; one located at the University of Alaska Fairbanks, the Northern office, and one in Anchorage, the Southern office, housed at, but not organizationally part of, the Alaska Pacific University. The UAF office consists of professors who allocate time to the Alaska Volcano Observatory (AVO). The professional personnel are predominately males who hold doctoral degrees. Master's and Bachelor degree holding personnel occupy technical positions, as do graduate students seeking postgraduate degrees. While the Northern office is predominately male, a few current graduate students and all office staff are female.

Chapter 2

Reviewed Literature

Organizations are cultures that are ever-changing due to the "everyday adjustments introduced by those who are related to it" (Bryman, 1991, p. 212). According to Becker (1982, p. 521), people continuously re-create culture and as this re-creation occurs, members confront new situations to which they must "adjust." Members adjusting to new situations directly "affect their shared understandings which constitute the culture's bedrock" (Bryman, 1991, p. 212). Organizational culture is co-created and enforced by members' communicative practices. Members will "respond to its precepts," but there is no way to predict what the response by those members will be (p. 213).

Organizational culture is learned through interpretation of symbols and meanings in the organization, but members usually do not notice their culture until they are taken out of it and experience one different from their own. Member interaction, are as matters taken for granted that constitutes the culture. An important role for the researcher is to notice those differences as well as how and when they are overlooked by members. In an organization's culture, a member is an active participant

and assists in the co-creation of a particular way of seeing the world. Being an active participant frames, gives sense to, and produces organizational behavior.

In organizations, members construct their own shared reality based on experiences, yet at times members may co-construct sub-cultures based on their similarities in perceptions of the organizational culture. According to Martin (1991), sub-cultures that form in organizations are examples of organizational differentiation. The differentiation perspective on organizations regards "cultural manifestations that are often inconsistent" with the overall culture of the organization and emerge as sub-cultures. Differentiation characterizes the organizational culture and "views culture as not homogeneous," but a place where it is "common for cultures to have several sub-cultural" entities (Mohan, 1993, p. 25). In organizations, distinct departmental sub-cultures and divisional self-interests are "'breeding grounds' for the 'birth' of locally shared meanings" (p. 25). According to Truskie (1999), organizations with multiple cultural patterns operating within its units are considered to be weak, stratified organizations. This organization consisting of more than one sub-culture becomes problematic because the

organizations with sub-cultures "depend upon one another" (p. 100).

Differentiation is common in the university context because of the "broad range of affiliations with disciplines that vary greatly in terms of philosophical orientation" (Mohan, 1993, p. 25). Mohan (1993) uses as exemplar departments of physical scientists as contrasted with those of the social scientific disciplines. Members of such departments are all in the university system, but bear little resemblance in their perceptions of shared meaning within disciplines. But the "way the sub cultures perceive their distinct role in the traditional university mission" of research, teaching, and community service exists simultaneously as a "strong convergence on a collective vision" that elicits identification across the disciplinary organization (p. 25). The example within university context is applicable to other organizations. Gregory (1983) states that organizations are more accurately viewed as multi-cultural and with cultural contexts that change over time rather than viewing organizational cultures as stable, homogeneous, time-bound entities.

The organization observed here was a scientific organization that researched natural phenomena which pose

possible danger to people and property. This organization is multi-cultural because differentiation is an evident characteristic of the place. There are two distinct offices, each located in different cities, but both are considered parts of the same organization. These two offices are bound by "documentary reality." The documentary interconnection was a government tactic, in the form of the Memorandum, used to bind the groups together in that they do not have any other commonalities other than the documented purpose. According to Smith (1973), recognizable forms, as they appear to the organization, are in "large part a product of the reporting . . . procedures of . . . organizations" which in various ways provide evidence of how the organization is governed (p. 1). The organization is portrayed as a single entity, but the unique characteristics of each office make it evident to members that there are actually two cultures in this organization.

The entire organization studies physical, scientific phenomena, but one office is located at a university and is part of a physical sciences department, making most of the members' university employees. The second office is located at a university in another city, but consists entirely of government employees and is not connected to its local

university system. The separation of the two offices according to Truskie (1999), describes geographical differentiation in the "organization as a result of the organization's growth and separation into two geographical units" (p. 100).

A similarity between the offices is that the research of the phenomena the organization studies is male-dominated in nature. According to Reskin and Padavic (1994), societies have a tendency to delegate tasks or influence one's interests on the basis of the workers' sex. In Western culture, physical science disciplines are primarily male-dominated fields. Women are discouraged from choosing physical science as their interest because they are "overlooked at earlier stages of their careers, making a negative effect on their scientific futures" (Halim, 1999, p. 1). Receiving recognition for their work does not happen as frequently for women in science because "the senior-level scientists, who are usually men, are doing a lot of the nominating and too often are nominating" and encouraging men in these disciplines. Brigid Hogan (1999), a professor of cell biology, had a term for this behavior, "the comfort factor." She states that men are encouraging to new and upcoming scientists who are comfortable to them

because they "naturally feel much more comfortable nominating or inviting 'somebody' who is friend or colleague" (p. 10). In a male-dominated discipline, men feel more comfortable around other men and, purposefully or not, make few attempts include or encourage women into this male-oriented discipline.

According to Cronin and Roger (1999), the under-representation of women in science is a progressive cycle, funnel shaped in nature, that occurs in the early stages of their educational careers. Women are first provided with nominal access to information involving the sciences, but eventually fewer women participate in the sciences than do men. As women choose careers, science is considered to be less of an option because of the cultural influences that define women in this society as "choosing careers similar to clerical support, customer service, and as teacher" (Wood, 1997, p. 347).

Perhaps many women consider science unappealing because the scientific disciplines are concerned with "things rather than with people" and there is a "stress and isolation" of being a minority (Cronin and Roger, 1999, p. 643). Women experience negative attitudes from male peers and respond negatively to the masculine oriented structure

of scientific lectures, and seem less interested in the narrowness of course content. Women also are more collective in nature, so the lack of opportunities for cooperative or interactive learning is not appealing to many of them and they turn to disciplines that are more focused on interaction between people. Since physical science is considered a male-oriented field, a major problem with women in physical science courses is that they are not even considered for enrollment. Schools are often guilty of "inadequate counseling and advising" of women and do not encourage women to enroll in such courses. Such advisement puts women students' focus on courses that are stereotypically for women (p. 643). Even though women focus on courses that are "feminine" in nature, at college they are still primarily learning in a male-oriented environment. According to Bate and Bowker (1997), women now comprise 51 percent of the undergraduate population, but male faculty still outnumber female faculty, diminishing young women's opportunities to have a female model or mentor. Without such encouragement, women find it discouraging in the classroom.

Sandler and Hall (1982), described the college classroom as a chilly climate for women. After researching

college classroom environments across the nation, these authors found treatment of women that encouraged behavior resulting in the degradation of women's intelligence. Sandler and Hall's research revealed that professors still call on "men by name more often than they do women and comments by professors divert the discussion about a woman's work to the topic of her appearance; the same does not occur with men" (p. 260). While this particular research is dated, it is essentially still valid to the experience of the researcher and her contemporary women peers.

Not only do male professors' actions often degrade women's intelligence, but male professors still seem to make women invisible in the physical science classroom. Faculty are more "attentive to men's comments and questions than to women's questions, giving more eye contact to men" and probing for more elaboration from them (Sandler and Hall, 1982, p. 260). Examples are often worded as if no women were present by using gender biased language such as "your wife" when giving general examples to the class. The instructor often encourages males to extend their comments in class and then later refer to male students by name. Females' ideas "often receive a quick nod or 'hmm' followed

by a change of focus" (p. 260). After years of being exposed to this gendered behavior, "male students become used to speaking out more often and receiving more attention while female students become used to listening more and speaking less" (p. 260).

Society's perceptions of women influence not only how they are portrayed in the classroom, but also in the workplace. Biased perceptions of women continue throughout their lives continuing after their education and into their career. Men and women in the work place act and react in ways that follow socially patterned behavior. When discussing male and female, the biological and innate physical features of a member are discussed. Gender, however, is a term for "learned communication behaviors . . . that are believed to be 'acceptable' behavior for men or women" (Bate and Bowker, 1997, p. 3). Unlike sex, gender is created through communication in everyday living. "Relationships with family, school, and intimate relationships" create learned behaviors by forming distinct barriers between masculine and feminine gender characteristics (p. 3).

A commonality between people is the need for predicting behavior. Stereotyping attempts to "hold

constant and make sense of the world we know" and if we "can interpret behaviors in a way that makes sense to us," we are led to believe we can "predict future behaviors and thereby introduce a measure of order to our world" (Bate and Bowker, 1997, p. 14).

There are several typical stereotypes creating masculine and feminine gender characteristics, a stereotype that is inflicted on one's life depending on the culture in which s/he lives. Throughout one's life, cultural stereotypes predict and therefore influence how men and women will interact in situations and determine what their goals will be for the rest of their lives. According to Bate and Bowker (1997), approximately 80 percent of employed women are clustered in occupations with historically low pay rates and centered around catering to people: secretary, nurse, bookkeeper, sales clerk, and waitress. Women's pay has not been equal to men's pay, encouraging women to feel less significant in the work place. As late as the 1990's, women employed full-time have earned approximately 60-70 percent of the salaries of an average full-time employed male. This disparity in pay denounces women's ability to carry the same responsibility and accomplish tasks at the same rate as men.

A male-dominated work place creates a more difficult working environment for women. A male-dominated working environment can make women very uncomfortable and less significant based on space allocated to certain members in the organization. Use of space in a working environment can influence one's interpretation of who has power in an organization. Members who have "higher status. . . have larger offices, control more space, and . . . control more access to the most . . . territory" (Lips, 1991, p. 110). Organizational members who occupy less space are "said to communicate fearfulness and low status" to members with higher status in the organization (p. 110). Since female members are more commonly known to be in subordinate positions, it is men who occupy a majority of the space and women who have only personal space allocated to them. Not only is women's space less, but is also considered to "be more public and crowded than men's" (p. 110). A man's cubicle or office will most likely not be entered by another member unless the occupant is there, but women's space is often used no matter if she is there or not. This behavior enforces judgment of subordinate members in organizations and in turn, influences the symbolic interaction interpreted by those organizational members.

Treatment of women in organizations is a learned and enforced behavior, and creates meaning regarding who has power in the organization. This meaning is interpreted by those who have power and to those who do not have power in the organization.

Society influences members' social construction by connecting limitations with sex or gender of members. Interaction between organizational members influences and encourages this behavior. While subordinates realize their treatment, confronting powerful members is very intimidating, therefore influencing subordinates to tolerate behavior that focuses on society's stereotypes based on sex and gender.

Chapter 3

Methodology

This Communication study is grounded in the Social Construction of Reality using organizational culture as the context. The Social Construction of Reality is a theoretical perspective informed by symbolic interactionism (LittleJohn, 1996, p. 179). Particularistic Ethnographic research was conducted to explore the organization's culture. I, as member-researcher, accumulated data on lived organizational experience by using such methods as participant observation, ethnographic interviews, and document study. These methods allowed me, as the research tool, to observe everyday communicative experience in the organizational setting and to determine how organizational members interpreted shared meaning based on that experience. Since I had been a member before beginning my ethnographic research, the methods proved to be an appropriate choice because they assisted in my recognition of the characteristics of the organizational culture and the culture's uniqueness. These human science research methods proved to be a viable way to understand the organization in its lived experience and to "gain a broad,

comprehensive picture of all aspects of the culture in question" (Alasuutari, 1998, p. 63).

The culture of an organization is not "a static structure," but an ever-changing process (Alasuutari, 1998, p. 89). An organizational culture, and its meanings for members, is formed by the members' communicative interaction in the organizational settings and the members' interpretation of those meanings. Members shape the organizational culture because organizations consist in people communicating.

I have been a participating member in the observed organization for three years and have taken part in the everyday rituals that have involved me in the organization's purposeful everyday living. My experience in the organization has provided me with enough knowledge of the place to form a member's understanding of how the members of this organization interact with one another and how symbols and meanings are interpreted throughout mundane life in the organization. I observed what organizational meanings were shared and the effects of shared meaning on the organization's culture. This was accomplished through sharing in and observing communicative interaction between other members of the place.

As a member of the organization, I was a woman in a male-dominated organization and a graduate student in a university research institution. My previous education was from a social science background in Geography. My original interests were different from a majority of the members in the organization because the focus of their interests was in the physical making or cause of the phenomena that was studied, not the social implications of the phenomena. Other members in the organization either had degrees or were working on degrees in the Natural Sciences. Since my focus was different, due to my educational background, there was a significant difference in my research interests as opposed to what the natural scientists in the organization were studying. How I perceived the organization was in many ways different from how the rest of the organization perceived the world.

My interest involving the organization itself does not involve the physical phenomena the organization studies, but the people who study the phenomena. My question involves how the organizational members goes about in their everyday lives. How has this organization developed such a distinct culture? My research observation was invested in noting my and other members' communicative interactions to

understand the cultural whole of this place. In order to understand this organizational culture, the appropriate methodology was Particularistic Ethnography.

Ethnography is produced to understand social implications in a place. Using ethnography as a standpoint for research directed my attention to matters that members use to understand the place, to describe interaction among members of this place, and to understand how members interact in everyday living. The focus is not to explain why the place is the way it is, but to understand how such a place is possible. In doing ethnography, I utilized my membership in the organization to understand the place by choosing methods that could only be useful in areas where I was treated as a member. I was the research tool and was "careful to connect the facts that I observed. . . which were linked to historical and cultural contingencies" in the organization (Baszanger and Dodier, 1997, p. 10). Ethnography is considered to be a "hybrid approach" and I was not only a data gatherer using multiple methods, but also " a person involved in activities directed towards other objectives" (p. 10). Since members in the organization saw me as a member, interaction between myself and other members in the organizational setting was not in

anyway outside cultural practices because I was not seen as an outsider or as a person who would be visualizing herself as separate from the organization's culture. I shared membership based on my work in the on-going process of the organization.

As ethnographer, I utilized my understanding of the organization and "unraveled, 'from within,' the internal logic of the behavior and ways of thinking . . ." in this place's culture (Malinowski in Alasuutari,1998, p. 62). In order to understand this communicative behavior I created an observational point of view; a research perspective. Often I detached myself from the shared meaning in the culture and did not allow myself my usual taken-for-granted perspective. I chose a view of not recognizing the distinct rituals and interactions that took place in the organization. I observed myself as not only a member, but also as an outsider; a researcher observing as a person who was new to the organization, treating the communicative interactions of members of the culture as something new to myself. By adding this perspective, I was able to better recognize the organization in its cultural uniqueness. Distancing my research perspective from my usual organizational role interaction gave me a place from which

to identify symbols and meanings that make the AVO unique. As I observed, I reported everyday life, patterns of behavior, and described ceremonial as well as everyday situations through my eyes as a researcher, and from the vantage of a perceived member of the observed organization. Since the organization saw me as a member, symbols and meanings of every day living were used around me as normal, mundane communicative interaction of the place. Communication took place as ordinary, mundane, and usual interaction between members. While I manipulated interaction to observe how members of the organization interacted with one another in specific situations, most of the interaction was simply available as I participated, as member, in the mundane duties of my work in the organization.

I was a trusted member and had, through time as a member, gained access in the organization. Participant observation was my method of choice because I was already a member and did not have to worry about establishing other members' trust. Also, this method allowed me to put "aside my notebook . . . and join myself in what was going on. . . in the organization" (Alasuutari,1998, p. 67). I recognized the culture and noted symbols and meanings of recognition

shared in the organization. Conversations around me were commonplace occurrence and since I had developed relationships with other members, they were comfortable and spoke openly about everyday living while I was present. As I observed and took part in everyday interaction, I made note of patterns in the organization's social expectations. My own interaction in the organization was influenced by these expectations, and I was still perceived as an organizational member sharing and performing those understood expectations.

As a participant observer, I "systematically noted and recorded events, behaviors, and objects in the social setting". . . (Marshall and Rossman, 1995, p. 79). I was a "tolerated member and an unobtrusive observer" in this social setting; and part of "the team" (p. 79).

As an "unobtrusive observer," I had the opportunity to note and collect a series of artifacts and note symbolic interactions between organizational members. Conducting an analysis of organizational documents contributed to other methods in understanding the organization's culturally shared meaning. Categorical theme analysis of documents as a method has many strengths because it is considered to be non-reactive and does not disturb the setting in any way.

These artifacts, in the form of memos, press releases, emails, etc., "were used as supplements for participant observations and ethnographic interviews" (Marshall and Rossman, 1995, p. 85). Including this additional information strengthened my analysis.

Symbolic interaction forms significant patterns of expectation in an organization. I compiled my notes in order to analyze and give meaning to the everyday symbolic events in the research setting. The artifacts, such as copies of email interaction and documents explaining the "perceived" or "ideal" framework of the organization, were gathered from members to provide information on the legal issues and forms of formal communication that bind this organization together. Meeting minutes were analyzed as artifacts to address the organization's formal agenda and shared interests. Other symbolic behaviors were noted, particularly pertaining to matters of status in the setting. These symbols involved both physical aspects of the setting, such as offices, and socially recognized artifacts that embody a sense of importance to members in the organization.

Documents were analyzed because the language involved in those documents was a "mode of action which depended

upon a reality constituted in documentary form" (Smith, 1973, p. 1). Emails, and other materials from the social interaction of the organization gave me a more thorough understanding of the culture of the place.

The artifacts and other symbolic data collected were exemplars of matters that impacted communication in the culture because members, in their mundane organizational life, interpreted them in specific ways. Ideas and interpretations are shared through the context of "telling" (Smith, 1973, p. 2). One way of accessing "telling" and the sharing of personal views is through ethnographic interviews. My ethnographic interviews, directed organizational conversations, were used to get a sense of the place by capturing members' personal points of view. Accounts, in this sense, are treated as versions of the place.

My membership in the organization was opportunistic for conducting ethnographic interviews because I could direct conversations with other members, offering my own accounts as member to contribute to my understanding of the place. According to Marshall and Rossman, "ethnographic interviews elicit the cognitive structures guiding participant's view" (p. 81) and by gathering this cultural

data as co-construction, I came to see human place, how members perceived themselves as an organized, coherent entity based on how they interact. For my own understanding of the culture, ethnographic interviewing was useful because it "elicited participant meanings for events and behaviors, and . . . highlighted the nuances of the culture" (p. 82). My interviews were "not conversations. . . but deliberately created . . . to provide an opportunity to talk" about socially constructed, shared realities that I was investigating (Dingwall, 1997, p. 59). To the respondent, our talk was a conversation, but to me, the researcher, these were carefully controlled interactions to solicit evidence of the organization's culture and members' perceptions. My ethnographic interviews proceeded "from the assumption that ". . . members had "shared world-views, the same kind of outlook on life or of interpreting reality" that had bearing on my understanding of the culture (p. 79).

The perceptions of and interaction between members in the organization produce the organization's culture. While shared interpretations were evident, members often interpreted interaction and a particular symbol in the organization differently, based on their own social

construction of reality. According to Littlejohn (1996), meanings and understandings are created in our interpretative practices in communication with others, a notion of reality deeply embedded in sociological thought (p. 179). Since every member has had different experiences, symbols and communicative interaction between members in the place may be interpreted in different ways. According to Shotter (1984), interaction between members is a way of telling each other how to behave and what to think, and the morality of everyday life in the organization. Interaction is interpreted and then acted on by members interpreting the interaction. Matters of interest to this research involved patterns of meaning and the interpretive practices that produce those meanings. Differences of interpretation noted are evidence of differentiation (sub-cultures) in the organization (Mohan, 1993, Martin & Meyerson, 1998).

Chapter 4

Analysis

The Alaska Volcano Observatory consists of two offices, with several work differentiated groups within each: geology, seismology, and remote sensing. Each of the three groups have group leaders, but the interpretation of whom the group leader is depends on who is asked, and from which office in the researched organization. This is so because there are different interpretations of leadership between groups in the researched organization. Particular groups exist between and across both the Northern and Southern offices. For example, the Remote Sensing group and the Seismology group consist of members from both the Northern and Southern offices. Even though they are members of spatially different offices, their identity also resides with their professional task group membership and concerns their research focus in the organization. Members in the Northern office will have a different interpretation of who is the group leader of a professional work group, in contrast to members in the Southern office. For example, the Remote Sensing group leader in the Northern office is considered neither to be the group leader nor the person in charge of Remote Sensing operations by members of the

Southern office, in the interpretations of a Remote Sensing group member in the Southern office. The Remote Sensing group member in the Southern office considers himself to be part of the Remote Sensing group expressly for monitoring the duties clearly involved with meeting the organization's mission, but projects aside from the organization's specific mission, he considers himself excluded by his own choice.

An AVO group member has two identities involving membership in the organization. One identity follows from the office with which they are associated within the organization. The association of a member with a certain office in the organization is interpreted by all organizational members as producing the primary organizational identity of a member. The second organizational identity involves group membership. The three professional groups in this organization have their own perceptions of how they perceive the academic discipline and the other groups in the organization. For example, members in the Remote Sensing Group will be concerned about satellite imagery during a volcanic eruption and the need for that imagery will influence the group's culture when the organization is responding to a

volcanic crisis. The Geology Group is concerned with data that has been compiled serially over time, so their time constraints are not as rigid as the Remote Sensing Group when collecting data during a crisis. This difference between the groups influences each group's perceptions of the differentiation of the culture. These different perceptions between offices and between different groups influence how every member in the organization communicates and how each member conceives and handles information in the place.

Because of the situationally changeable nature of organizational identity, being both a member of a work group and a member of a certain office, tensions between groups and members become layered, such that their identities both conflict and overlap. It is possible, for instance, for a member to be from the Southern office and also be a member of the Remote Sensing Group, which connects this member with the Northern office because that office also has Remote Sensing members.

After methodologically saturating myself with the data, I identified three themes from my journal entries that categorize my experience in the organization and that are foundational to the way members make sense of their

organization and of its relation to its social world. The themes align key issues in the organizational setting that make the organization's culture unique. The categories describe how organizational members perceive themselves and their relation to the social embedding of their professional world. Co-constructed values, perceptions, and goals of organizational members surface in the data resulting in themes that characterize this organization.

Organizational Bifurcation

The organization researched was originally created to inform agencies and the public about volcanic hazards. The members of the research site have not only focused on this issue, but also matters that differentiate between and within the two offices of the organization.

The Southern office is designated as the "crisis center," meaning that all information involving volcanic crises, eruptions, and communication from other agencies must be distributed first to this office. The Southern office has the final decision-making power during a crisis. The Scientist in Charge of the entire operation is located in the Southern office and is the official voice for the organization. Any statement made from the Southern or Northern office is cleared by the Scientist in Charge in

regard to what issues are discussed and not discussed with the public, the media, or with other agencies.

The Southern office is an old dormitory on a college campus in Anchorage. There are two laboratories, but which are not used as office space, only for laboratory work and research. Each member has his/her own office so there are no room dividers needed for configuring space to number of members. The bathrooms are not designated by sex and can be used by anyone. Locks on the doors are used to ensure privacy. Even though the Southern office is part of the same organization as the Northern office, the differences in the physical settings of these two offices is evident.

The Northern office is part of the organization, but only in so far as to contribute information to the Southern office and by its functional role in regard to the funding of the organization. Members of the Northern site do not have the authority to notify other agencies or the public in regard to the geologic events for which the entire organization is formed to track. If the Northern office discovers an event for which notification is required, the information must be forwarded to the Southern office and that office will determine if the information is of

sufficient significance for disseminating and through which appropriate channels.

The Northern office is located at the Geophysical Institute (GI), the central hub for all natural science research at the University. The floors of the GI are divided by discipline and mostly contain laboratories with a few offices alongside the laboratories. The laboratories consist of felt dividers that act as walls creating cubicles for defining space between organizational members.

The hierarchical structure in this organization is different between the Northern and Southern offices. The Northern office is in a University setting. Northern office members construct status and perceptions of power by the educational degrees that each organizational member has attained. Organizational members with doctoral degrees have more material status such as office space. Offices are given to organizational members who hold a Ph.D. and graduate students work in the laboratory space outside of the offices. One regular office is occupied by graduate students, but the students there are allowed to occupy the space only because they are working on their doctoral degrees.

Communication between the scientists and graduate students is high context in nature. Oversight directions are not linear sequential, therefore interpersonal research usually needs to be conducted by lower status members of the culture (graduate students) to know what target questions to ask their supervisor in order to accumulate more information about how to do a research project. At times, instruction manuals on how to work certain computer software programs are not available and it is up to the graduate student to successfully understand the entire project in order to do their specific parts of the work. Certain technicians are considered to be tools for the scientists because they are knowledgeable in the computer software systems being used. Graduate students and the lead scientists ask the technicians the most questions because they are considered to be the backbone of the organization and relied upon to run operations. If the technicians don't know what the problem is or how to solve it, then nobody knows.

Northern office members who hold a Ph.D. have other organizational members' respect, and also have the power to control funds and the efforts of other members of the organization. The Southern office, by contrast, is a

government setting. Its members perceive productive organizational members as persons with excellent "team player" skills. The Southern office does not focus on educational degrees attained and each Southern office member has equal office space allocated. The Southern office is understood by members to be a collective and collaborative environment. Southern office members are predominately male, but the supervisor during the period of this research was female. Communicative interaction between employees who hold Ph.D's and students is very common. A van is used to transport Southern office members on "field trips" and external lunches. Hard work is encouraged in this office, but work breaks involving daily jogs and walks by the lake are also encouraged. The Scientist in Charge, the supervisor, is seen taking walks by the lake quite often which encourages, by example, work breaks to the Southern office members. Directions given to all members involving technical work (e.g., the changing of seismic drums) trained Southern office members will do the job with new members to ensure that newcomers have an understanding of their expected duties.

The Northern office creates a hierarchical structure by recognizing and demonstrating status and power to

Northern office members with doctoral degrees and placing less recognition of power onto other Northern office members without doctoral degrees. Member status begins in the social hierarchy of education. Another substance of differentiation between the Southern office and the Northern office is that beyond the Northern office being in a university setting with education as a matter of perceived status, it also is funded differently. The Northern office is legally obligated to the Southern office because a document, The Memorandum of Understanding, links the Northern and Southern offices to focus on the same goals which are to monitor volcanoes in the Alaska region and to notify concerned agencies and the public. The Memorandum of Understanding is a federal document that is supported by the State. The Memorandum states that Federal money will be allocated to the Southern office, the government office, and after being allocated to the Southern office, the Southern office will allocate money to the Northern office. The Federal money does not fully fund the Northern office, but the Northern office is still a contractual participant in the AVO organization because of the Memorandum of Understanding. A majority of the funding in the Northern office is derived from research grants and

from instructing University courses. The organizational members' co-construction of their office's status in relation to the Southern office, this culture resembles the popular perception of an inferiority complex.

A status report sent out to the organization by a group leader in the Northern office describes the shared frustration of the Northern office members. The reporting member's focus cannot be exclusively on his AVO organizational duties, as bound by federal mandate. He must attend to his obligations to the University and to other grant foundations that assist in his funding as a member of the University which houses the Northern office. A member of the Northern office stated in his report, explaining to the organization the status of his summer projects, that "other projects are taking a lot of my time so I apologize if I am hard to reach or seem to not be involved in AVO activities." The Southern office's only focus is the organization's mission; to monitor volcanoes in Alaska and to notify the public and other concerned agencies. The members in Northern office are contributing to the workload, but cannot focus exclusively on the organization's mission because unlike the members in the Southern office, the members in the Northern office need to

focus attention to other tasks that are based in their earning a paycheck. The members in the Northern office contribute labor to the organization's mission, but believe the Southern office perceives the Northern office as a lesser contributing part of the organization and not as a necessary part of the organization in completing its mission in the most effective way. Members in the Northern office comment too on the attention paid by the media and other agencies to the Southern office members and note the lesser response toward members in the Northern office, even though the members in the Northern office contribute time and energy toward the organization's mission.

The Southern office is located closer to the volcanoes in Alaska, which gives members of the Southern office the ability to take air flights to observe the volcanic region. If members in the Northern office were to take part, those members would have to fly to Anchorage and then coordinate with the Southern members. Since this is more expensive, the Southern office participates in a majority of the on-site flights and discusses observations through email or phone calls with members of the Northern office. A member of the Northern office told other Northern office members that this "special attention" to the Southern office is

"not fair." After the members in the Northern office had received an email about Southern office members flying out to a volcano that had been showing activity, this member of the Northern office remarked, "Fairbanks never gets to go!" (Northern member, March 1999). Everyday talk of members in the Northern office often shows resentment toward members in the Southern office because a majority of the "glorified work," such as flights to the volcanoes, interviews with the media, and taking part in educational volcano programs, is not usually shared by the members of the Northern office, leaving those members' jobs mostly dedicated to laboratory work and research. The members in the Southern office do conduct research projects, but are continuously recognized by other agencies and the public, unlike members in the Northern office.

The members of the Northern office work and contribute information as efficiently as the members in the Southern office, but the members in the Northern office do not have the same organizational status as the members in the Southern office. The members in the Northern office observe the members in the Southern office enjoying attention by the media, associated agencies, and the public, and interpret that attention to be giving credit where credit

is not due. To the members in the Northern office, attention and appreciation should be provided to not just the members of the Southern office, but also to the members in the Northern office.

An email was sent to the Southern office by a Northern office member concerning possible activity around a certain volcano in the Kamchatka Peninsula, Russia. A Southern office employee, the main organizational contact with the Russian volcanologists, emailed back to the Northern member and to the rest of the organization stating that it was "not true" because he had spoken already with the Russians. Since Russians are seen to trust people rather than organizations, a Southern office member who is fluent in Russian was designated as the contact for volcanic activity in Russia. The Southern office Russian contact later called the Remote Sensing group leader in the Northern office to discuss the incident and was quoted as saying, "The Northern office and Southern office are always in competition" (observation of discussion between two Fairbanks members, Fall 1998). After this phone call from the Southern office member, the Northern office members in the Remote Sensing group were told to notify him, the Southern office member who was the Russian contact, before

there was ever another update sent out to the entire organization. The control this Southern office member had over the Northern office Remote Sensing Group members was troubling because the members in the Northern office began to question if the Northern office was respected as an integral part of the organization or considered by the members in the Southern office as a respected entity in the researched organization. The members in the Northern office perceive that the members in the Southern office treat the Northern office members like children, because the members in the Northern office do not have the ability to make decisions that will influence the organization as a whole. Members in the Northern office feel controlled in what information they can disseminate to the public and to other agencies. Northern office members are reminded that they do not have the same capabilities or authority as the Southern office members. The members in the Northern office are regularly concerned with the control members of the Southern office have over the Northern office and its members. Because organizational status dominance is exercised by the members in the Southern office, when members in the Northern office make decisions or assume an analysis of data without notifying the members in the

Southern office, Northern members, already conscious of hierarchy, have come to identify the Northern office, and themselves by membership, as inferior; subordinate to the Southern office.

Members in the researched organization believe they have learned, through observation of members of both offices interacting with one another, that if organizational members are "liked" by the Scientist in Charge, those "liked" members will have more opportunities available to them. Those "liked" members from this perspective are members who trust and respect her. Those "liked" members in the organization seem so because the Northern office members can be controlled by the members in the Southern office. An example of the Scientist in Charge providing opportunities for "liked" organizational members occurred for me in 1998. I had written a paper for an international conference in Cairns, Australia and was given the opportunity to visit Cairns and formally present my paper. I had told my group leader in the Northern office that my paper for the international conference in Cairns was accepted, but he was hesitant about sending me to the conference and merely joked that he should go to Cairns, Australia. I felt frustrated because I had observed

organizational members going to international conferences regularly, and my group leader obviously did not agree that I should have this opportunity. The group leader's explanation for his hesitancy about me going to the international conference was that the Northern office group lacked travel funds. I decided to go to the organizational member who can make things happen, the Scientist in Charge, and explain to her why this international conference would be a major opportunity for me. After the Scientist in Charge listened to me describe the work that I had done for the paper, she told me not to worry and that I would be able to go. I asked her how I would go if my group leader in the Northern office was hesitant about letting me go. She told me not to worry and that she would see that he found the money to send me. "We'll work something out. If it's really a problem then I'll pay half. Just be sure to share what you learned when you get back from your trip." As a result of the Scientist in Charge's power in the organization, I, as a graduate student in the Northern office, had the opportunity to spend two weeks in Cairns, Australia and participate in an international conference. As a member of the Northern office, I did not have the same access to opportunities as other Northern office graduate

students, such as being able to do field work. Members of the Southern office used their power to influence future treatment toward me, as a neglected Northern office employee. The treatment I was experienced was unequal to the other graduate students in the Northern office. I had worked in the Northern office for two summers and had never had the opportunity to fly to a volcano and experience it through my own eyes. Since I was in the Remote Sensing Group, I had always observed volcanoes from satellite imagery and my goal was to be able to see a volcano, as had other graduate students in the organization. When I asked a Northern office group member when I would be able to go out into the field, I was told, "Shelly, you actually have to hike, carry what you need on your back, and there aren't any bathrooms or stores out there!" His belittling explanation denied being physically "in shape," and my experience of being an Alaskan for 10 years. Being told what "backpacking" is by a Northern office member who had only been in Alaska for about a year, was quite disturbing. I felt this person was denying both my experience and my goals in the organization. His statement began my recognition that my treatment was not based just on my

educational path as "only" social science, but also more bluntly to the fact that I was a woman in a "boys club."

When I knew I had only one summer left as an organizational member, I asked the Scientist in Charge if I could spend the remainder of my time in the organization at the Southern office. I knew from earlier experience that, as a Southern office member, I would be treated with respect and would be given tasks that were challenging rather than belittling to me. My experience with graduate work in the Northern office group involved monitoring volcanic activity through satellite imagery, but also, as I now recognized, other tasks given to me were stereotypically gendered. These tasks were organizing files, mailing letters, and finding addresses for my group leader in the Northern office. Even though I was a graduate student in the satellite group in the Northern office and therefore should be spending my time doing research concerning satellite observations, I was confined to secretarial work for my group leader. After I recognized there was a gendered difference in the duties I was assigned and the duties that other graduate students were being assigned, I discussed the disparity with members in the Southern office knowing from my organizational

observation that they had the power to protect me from what I, by then, perceived as unfair treatment. I believed that members in the Southern office would take appropriate action to ensure that my future treatment in the organization would be fair. Southern office members had the organizational power to protect me resulted from my observation of a previous use of the power of the Southern office.

I knew from discussion among Southern office members, that a particular member in the Northern office group was considered to be an annoyance to members in the Southern office because his behavior was considered unprofessional and inappropriate. From my research observations and from participating in conversations discussing this Northern office member's inappropriate behavior, I knew that the Scientist in Charge had spoken with Northern office members who occupy positions hierarchically above this annoying Northern member. The Northern office member's annoying behavior consisted of sexist comments, questioning the members in the Southern office's authority, and not being a "team player." He is now "blackballed" by Southern office members and is much less likely to be asked to take part in everyday interaction with the Southern office members. This

person is now having to find other channels to access new information about the volcanic events that may arise from organizational monitoring. His behaviors (not respecting the Southern office members' authority and not working with organizational members as a team) affected the process of interaction in the organization both professionally and culturally. His negative behavior affected how members' mundane interaction takes place in the organization. Because that mundane interaction constitutes the culture of the place, member perceptions co-create member's views of each other, and the status of members, this Northern office member is now considered a nuisance to the organization generally. He is less likely to receive information about volcanic activity as well as information involving the organization.

When talking to a Northern member, a friend and colleague, about other Northern office members who questioned the Southern member's dominance in the researched organization, my friend/colleague responded saying, "Certain people, some members in the Northern office, have a very unprofessional attitude and attempt to build bigger walls between these various groups consciously. . . though such people may be at times

competent in the their jobs, they harm this organization with their negative attitude" (Summer, 1999).

The Northern Office's "Inferiority Complex"

Members in the Northern office perceive that authority unfairly belongs to the members in the Southern office. The members in the Southern office have power to control information sent to members in the Northern office and also have the power to withhold funding for Northern office members' work if the Scientist in Charge does not believe it is deserved. The control the members in the Southern office have over the members in the Northern office contributes to the members in the Northern office feeling and expressing in their interactions the personal diminishment American society popularly associates with the Freudian concept of the inferiority complex.

Members in the Northern office not only display feelings of inferiority toward members in the Southern office, but those perceptions seem to affect relations within the hierarchy of other members in the Northern office. A manifestation of such intra-office feelings of inferiority occurred in October 1998 when a member in the Northern office had applied for a professorship, but was not selected. The Northern office member was turned down

because a candidate from another University was selected for the position. The Northern office member applied for the professorship because he desired a higher position in the hierarchical structure of the Northern office. When he and I discussed the professorship he expressed that, "I can't wait till I'm a professor because then I can go back to the University where I was working on my Ph.D. and show off my authority as a professor." What I interpreted from the interaction was that in this person's mind, when an organizational member is a professor, prestige, power, and respect are handed out when the title is awarded. Since the Northern member was not chosen for the professorship, that person showed resentment by making disparaging remarks about the person chosen for the professorship. Not being chosen, the Northern office member's way of displaying his resentment was by making negative comments about the candidate who was chosen for the professorship. The person not chosen was involved in a conversation with me during a weekday in October, 1998. We discussed and, at his choice, brainstormed why he was not considered for the professorship. As the conversation progressed, I spoke sympathetically to his situation. In response to my sympathy, the rejected member said the scientist selected

for the professorship was "a jerk and makes graduate students get out of his laboratory because he's territorial and does not like to share working space." He continued to insult the selected candidate, saying that the new professor had said to him: "Graduate students get paid too much already so why should they get more money?" In telling this account, the member wanted to be perceived as someone supportive of graduate students and one who dedicates time to defend graduate students by supporting their needs (such as decent salaries and office or laboratory space for research). Since the Northern office group member was discouraged about the organization's choice for the professorship, he made a conscious effort to include comments that demeaned the selected candidate and through these comments he attempted to establish, to me and to himself, that he was a better candidate for the professorship. As I was hearing his negative comments about the person selected, I assumed that he hoped I would spread the negative comments to other graduate students in order to make him look to be more appropriate for the professorship than the person selected. He was willing to make negative comments about someone who was to be a new member to the Northern office. His purposeful comments

could taint the new member's reputation before he even arrived at the Northern office. His selfish action seemed representative of the individualistic attitude in the Northern office. Not receiving the professorship was taken as an insult to this member's intelligence, ability to conduct research, and his ability to hold his place in the power structure of the Northern office. Lack of information or lack of access to information both represent power in a status-conscious organization (Mumby, 1994).

Having access to or knowledge of information concerning the researched organization's everyday events and interactions is a symbol of status and/or power. When organizational members are aware that new information has not been released to organizational members, that information can be used to enhance member perceptions of status. Feelings of inferiority can form because lack of information means lack of power in the researched organization. The Southern office members inform the Northern office members when new information concerning volcanic activity and volcanic response procedures are addressed by the researched organization. Since the Northern office members may not be informed of volcanic response issues, or what Southern group members are doing

day to day, I have observed Northern office members to make up information concerning the organization's volcanic response issues or Southern office members' daily duties.

A Northern office member might make up information or make assumptions about Southern members because the Northern office member really doesn't know specific information and yet wants to manage the impression that s/he does know such information about the researched organization in order to give an appearance of power in the culture of the Northern office. In October of 1998,for example, a Northern office member asked, "What does 'a certain Southern office member' do anyway!?" Since the Northern office member did not actually know what the Southern office member did day-to-day in the researched organization, he instead questioned the Southern office member's importance to the organization. Instead of directly asking the Southern office member, the Northern office member asked other Northern office members what the Southern office member did with his time. Evidently he, as a member of the Northern office, had not experienced what the Southern office member did, day-to-day, in his job. He had never visited the Southern office member's office and had taken no initiative to learn what this Southern office

member did in his position. Instead of going to visit the Southern group member and asking him what he did day-to-day, the Northern office member questioned the Southern office member's organizational importance to other members of the Northern office. He did not want to portray status weakness by asking the Southern office member about day-to-day happenings occur in the Southern office. Asking questions about the Southern office's activities would appear to concede that the Northern office member does not have that information and needs assistance in learning more about the organization. Being seen to lack information is interpreted as a sign of not having power in the organization and a sign of the Northern office member feeling the shared inferiority of the Northern office. As Mumby (1994) says, both having and not having information are interpreted here to represent power.

When members in the researched organization have access to information, that information symbolizes those organizational members to have control over other organizational members who do not have as much accessibility for information involving the work and workings with the researched organization. The informed members have control because uninformed members of the

organization have to rely on informed members for information. The Southern office is the focal point for updated information, and organizational members have both a requirement and a shared understanding to first notify the members in the Southern office, and then later notify the Northern office members when there is any updated information concerning volcanic activity. The shared understanding among organizational members is enforced by a legal document, the Memorandum of Understanding, that describes the organization's structure and where the main office is located for the notification of volcanic activity. Even though the Memorandum of Understanding exists and there is a shared understanding of the Southern office being the most significant in having access to updated volcanic information, group leaders in the Northern office have been known to hold information from the Southern office for a period of time instead of notifying Southern office members immediately after new information about volcanic activity is discovered.

An event involving a group leader and myself occurred in the Northern office about withholding information concerning possible volcanic activity in December 1998. At this time I was monitoring Alaskan volcanoes using

satellite imagery, when I noticed possible volcanic activity. I notified my group leader and suggested that we notify members in the Southern office since the possible volcanic activity would be considered new information. Instead of the group leader agreeing to my suggestion of notifying the Southern office, he directed me to wait until another group member from the Northern office got back from lunch. By withholding information from the members in the Southern office, members' mutual understanding of the notification process was not followed by the group leader in the Northern office. The group leader told me instead, to keep things in-house before sending the updated information to the Southern office. By keeping updated information about volcanic activity or about the organization in the Northern office, and not disseminating the information to the members in the Southern office, members in the Northern office display communicative behaviors that are interpreted by other organizational members as competitive behavior. Such behavior makes collateral of information by a calculated choice of when and how much to share.

Not only have I observed members in the Northern office to act competitively toward members in the Southern

office, but I have also observed Northern office members to show competitive behavior toward members in other organizations. A member in the Northern office attended a conference in December, 1998 to market a project that a group in the Northern office had been working on for a few months. A Southern office member, who is a member of this particular inter-office professional group, was not interested in the project because he believed the project was not the most useful way to utilize the data. Since the Northern group member was aware of the Southern group member's disinterest, the Northern group member was even more compelled to see that the project was perceived as successful in the organization. At the conference, while marketing the Northern office project, the Northern group member emailed the person leading the project and related that a member from another organization was very interested in the Northern office's research and ideas. The Northern group member said the person from the other organization was "lurking behind 'him' and ready to spit nickels" because the member from the other organization was "interested in what we [the Northern office members in the researched organization], as a group, were doing." The Northern Office group member ended his description of the

interaction saying: "Well, you snooze, you lose!" The Northern office member made it evident to others in this office that he was a large part of the Northern office group's success and an important part, by extension, of the organization's research. By interpreting how the person in the other organization was reacting to the Northern office project, the Northern group was attempting to enhance perceptions of himself to other members in the Northern office and to his professional group.

Information as Power

Members in the Northern office of the organization associate power and status with having access to updated information about volcanic activity because the researched organization is centered around updating and informing other agencies about volcanic events. In order to accomplish the organization's goals, organization members need to know updated information about volcanic activity in a timely manner. Not being informed about a certain situation concerning volcanic activity can be perceived to diminish a member's sense of significance to the organization because being uninformed symbolizes low priority or insignificance in the hierarchy of the researched organization.

According to Daniels and Spiker (1994), information provides the basis for communication, which in turn, allocates power to the organization. By assuming the responsibility for notifying other organizational members who are not as informed, members in the organization exercise status. Members initiating communication to other members act out a perceived dominance over other organizational members. The informed organizational member has control based in the ability to choose when and how to inform other organizational members, and of what information s/he views as appropriate. In the researched organization, being informed symbolizes job competency and being necessary to the organization. Members appreciate a person's effort, time allocated to organizational membership, and loyalty to the organization as a whole.

Since information establishes power in the organization, members who distribute email throughout the researched organization to inform other organizational members of updated volcanic or organizational information demonstrate their significance in the organization. Such significance emerges because the informers initiate events that "make things happen" in reaching the researched organization's goals of disseminating updated information

and being the most informed organization about volcanic activity in the region.

In February, 2000, a group leader from the Northern office sent an email to other group members in the Northern office to inform them that he, the Northern office group leader, had been researching activity involving a certain eruption. In the email, the Northern office group leader said he found the process of allocating data to be difficult because other Northern office group members had not been using a database efficiently. The Northern office group leader reported in his email that the group member who designed the database did not design a "real database" because the database "does not completely function like a typical database." After associating the database creator with the dysfunctional database, the group leader closed the email by telling Northern office group members that he, the group leader, would try to increase funding to "fix" the problem of the dysfunctional database. After the email was dispersed, the database creator replied to the group leader and his email was also distributed to the rest of the Northern office group members. The database creator began his email by telling group members that he was offering the Northern office group "a few clarifications on

the group leader's database observations." He told the other Northern office group members that the database was a "fully functional database, but, like any other database it is only as good as the information entered." The database creator provided more information to the Northern office group members than did the group leader in the previous email, stating that he had "talked to technical personnel" and had taken steps to "fix" the data being entered into the database. He ended the email saying: "We'll put more effort into solving these problems this Spring and get everything. . . up and fully operational again." The database creator had purposefully undercut members' perceptions of the group leader by discounting what had been said in the earlier email. Undercutting is interpreted culturally as competition and as a challenge to the group leader's knowledge and authority over other members in the Northern office group.

Not only is there undercutting and competition between the Northern office members for information and power, but there is also competition for how fast the information is disseminated to the Southern office. In February 1999, a message concerning volcanic activity was delivered from a neighboring agency to the Southern office. An employee in

the Southern office called to inform the Northern office. The Northern office group member responded to the Southern office member's notification by commenting, "We're already on it!" The Northern office group leader wanted to be perceived as quick and efficient when the volcanic event was occurring. The group leader told the group, "We need to get this report out to show them we're on top of things!" (personal communication, February, 1999).

Another incident in September 1998 portrayed the perceptions and interpretive construct of the Northern office group involving volcanic response. Two group members in the Northern office had discovered volcanic activity in Russia and had notified the group leader in the Northern office. The group leader asked, "Do they (Southern office) know we (a Northern office group) are the first ones to see this?" The two group members in the Northern office said, "yes." The group leader looked pleased and said, "I like this competition stuff!" After the data was analyzed, the Northern office group members were required to notify Southern office members. A Southern office member who is also part of the research group observing the new volcanic activity in Russia advised the Northern office group to wait on calling Russia because the other Southern group

members had not been notified. After getting off the phone with the Southern office member, a Northern office group member who was part of the group that discovered the volcanic activity told the other Northern office group members not to wait for the Southern office members to be notified. "What? Don't wait for the other Southern office members! Just do it [call Russia]!" Another Northern office group member overhearing the conversation spoke up and told the other Northern group members that the appropriate procedure is to wait and notify the Southern office members. After hearing this advice, the Northern group members chose to take the appropriate measures, but there was a considerable amount of resistance during the process of waiting to notify the Southern office members (September, 1998). From my observations, this group interpreted events in regard to their perceived competition with the Southern office rather than in regard to the goals as an organization. Concepts of the organization as a single entity were superceded by interpretive patterns based in the "inferiority" that underlies the interoffice competitiveness.

Discovering new information gives organizational members responsibility for disseminating that new

information to the extended organization. The responsibility for disseminating updated information is an example of organizational members having control, but there are other issues that instigate the controlling of behavior. Organizational members who are responsible for allocating money to organizational group members exercise dominance and control to enforce an organizational member's perceptions of authority and status.

A situation demonstrating funding authority as control is an event that took place in the Northern office in January, 1999. A technical member of the Northern office had told a Northern office group leader that another member, under the group leader's supervision, had done an adequate job in learning the computer system and assisting in the completion of a Northern office group project. The group leader's reply was, "Oh, so you can train her!" The person targeted by his remark, who had learned the computer system in support of the group project, lashed back, "Well, quicker than you! You can't teach old dogs new tricks, right?" The group leader interpreted the response as a test of his authority. In response, the group leader mentioned his ability to control funds that support "his" group members and mentioned that "he" paid this person's

salary. There were no other exchanges of words after that statement and the member who had questioned the group leader left the laboratory. When a member of the researched organization feels oppressed, control often is an issue. Control sets the tone for who has the last the word and at times, money can enforce this control and enhance member feelings of inferiority in the structure of power.

Not only are Northern office group members reminded of funding by their group leaders, the issue also involves tension between the members in the Northern and Southern offices. Northern office members who are partially supported by Southern office, USGS funds, are thereby reminded of control issues. As I took part in a conversation with a Southern office member (Summer, 1999), there was mention of a Northern office member who was partially supported by government funds; funds controlled by the Southern office. The Northern office member was expected to allocate a specific amount of his work time to the researched organization. His daily work was intended to reflect the percentage of his paycheck that the Southern office supplied. After being reminded several times that he was not fulfilling the obligations of his funding, the Northern office member still did not alter his attention to

his AVO duties. He was finally told bluntly that the Southern office would decrease the funding it had initially allocated and paid to him in the past. Control of money was used overtly in the instance as a way to influence time spent on preferred tasks in the researched organization. The threat of taking away a percentage of the Northern office member's paycheck was considered in the Northern office to be a punishment inflicted by the Southern office. The Northern office member was eventually forced to resort to other funding research foundations, or to the University, to assist in the percentage that had earlier been supplemented by the federal money allocated and controlled by the Southern office.

In this organization, information is power. Organizational members who are the gatekeepers in the organization and who have access to updated information are powerful in the researched organization. Dahl (1957),claims power is an integral part of organizational structure and contends that "such a position is untenable because it focuses on sources of power rather than the actual power" (p. 57). In the circumstance of information as power, the Southern office is the source of power because the members in the Southern office control and encompass all

information in the organization. The Southern office is the centralized unit that keeps the research organization in funded existence.

Since the Southern office spends a majority of the time in "the limelight," that is, working with media, meeting with other agencies, and taking part in educational volcano videos, recognition for accomplishments gives these members the ability to take part in large projects with other organizations. Those other organizations increase the opportunity for securing funds from granting foundations. Who an organizational member knows is key to accomplishing research goals and being selected to be a part of a successful proposal. "Accepted proposals" in the organization means funding for research which, in turn, leads to job safety in the organization. The goal of the organization's members is to attain enough successful projects with funding to demonstrate to other organizational members that they, the funded organizational members, are an asset to the researched organization. Organizational members considered assets to the organization will be informed of new events and upcoming issues involving the organization, such as helicopter trips to volcanoes, money for field projects, and proposals being

worked in Southern and Northern offices in the researched organization. Organizational members who are informed of day to day happenings in the organization and what is occurring in the Northern and Southern offices will gain power and control in the researched organization.

Working toward "excellence" in this researched organization has different connotations depending upon which office (the Northern office or Southern office) it is being discussed. The Southern office's role in the researched organization is the center for all information and notifying all agencies that could be affected by volcanic activity. Communication skills are essential to successful crisis response, the focus of the Southern office. Those skills, in turn, influence the potential of members in the Southern office in the organization. The Northern office's role in the organization is more concerned with the technical aspects (e.g. monitoring) and communication skills are not seen as essential to completing the Northern office goals in the organization. The only communication stressed in the Northern office members' role is to ensure that all information is filtered to the Southern office in order

that members in the Southern office can make decisions on how to respond to the information acquired.

In the building where the Northern office is located, a seminar entitled "Communication Skills for Science and Technical Professionals" was available during a weekday to educate organizational members about competent communication in the natural sciences, the organizational members' field of work (March, 1999). I attended this seminar because I saw it as an opportunity to improve my communication skills, which in turn would improve the facilitation of my research to other members of the organization. In observing which members in the Northern office were attending the seminar, I realized that those in attendance were mostly administrative assistants and members of the building's business office. I did not see any Northern office scientists at this seminar. This observation is parallel to Munoz's comment that scientists, like those in the Northern office, do not view communication as an important part of their role in the organization. Scientists not attending such training sessions substantiates the perception that the Northern office and its members are unaware of the importance of competent communication.

One skill needed to be a competent communicator in the organization is the use of tact in sharing information with the entire research organization and making sure all appropriate organizational members are informed so no member steps over any other organizational member's authority. Before anyone shares information within the researched organization, the Scientist in Charge, located in the Southern office, must be informed. If unsupported information is floating through the organization, problems can arise. Organizational members who do not have sufficient information cannot determine what is "correct" information. Therefore, members might make unsupported assumptions and come to inappropriate conclusions. Because of the nature of the information handled by the organization (e.g., volcanic crisis information), information must be controlled by a central organizational entity. The Scientist in Charge is mandated this role.

At the time of my research, the Scientist in Charge was a female who had dedicated a large part of her life to the natural sciences. An example of not going through the appropriate channels before disseminating information occurred in March, 1999, involving the analysis of volcanic data. A Northern office group member observed an anomaly at

a certain volcano and shared his opinion in a Northern office meeting about what was occurring with the volcanic system. That member's opinion was then dispersed to the Southern office members by email. A Southern office member did not agree with the interpretation. Concern was raised about the Northern office member's interpretation, and about the way that the Northern office member handled the information concerning the analysis (i.e., not informing the Scientist in Charge). The Northern office member was accused of making assumptions about volcanic activity "from the hip." He was told forcefully by another Northern office member to first contact the Scientist in Charge, and not to validate an analysis without a discussion involving the Southern office. The member who was "corrected" in his behavior became distressed and asked, "Are we being censored? Can we not give an opinion if Anchorage does not agree?" The Southern office exercised information control in influencing how the data was analyzed.

The most "powerful" opinion in an organization will be the most influential. In an organization of scientists that usually will be the opinion of the more respected member (scientist). Organizational members with a more "powerful" opinion will most likely be the first members to be

informed during a potential crisis, even though the "wall chart" may give a contrasting representation to the organization's culture.

The AVO has a set protocol or "wall chart" for whom to call when a crisis occurs. If activity is observed, the information is given to the group leader in the Northern or Southern offices. The group leader will then notify the Scientist in Charge. In the Northern office, there is a position responsible for the bridging of communication between the Northern and Southern offices. The Northern office position is that of the Coordinating Scientist. Even though this position is integral to the organization, that position is not fully funded by the United States Geological Survey; i.e., the Southern office. The University and various science foundations' funds supplement the position of the Coordinating Scientist.

The organization has the lead scientist in the Southern office, but also has a lead scientist position in the Northern office to oversee members and their work. Because the current Coordinating Scientist has other duties, such as teaching college courses, advising graduate students, and working on projects funded by science foundations, his time is stretched, making time allocated

to supervisory duties for the AVO very limited. Often juggling University duties and AVO organizational duties becomes an issue because it is difficult to prioritize. Keeping Northern members informed of organizational matters can be a time-consuming task in itself.

Many Northern office members are involved in multiple tasks and competing time expenditures; wearing the several hats of college lecturer, volcanologist, and graduate student advisor. Staying current on updated information is essential to accomplishing organizational responsibilities for maintaining one's perceived power in the organization. When being a part of the "second level" of the organization's power structure in regard to the task is seen in the Northern office to be made difficult for Northern office members, those members often become frustrated. Northern members become frustrated by the structural handling of organizational information and because in the organizational culture, members are socialized to associate the early possession of significant information with organizational power.

An example of the obvious frustration of members expectations when those organizational members are not informed in a timely manner about updated volcanic activity

occurred in June, 1998 with the weekend eruption of a Russian volcano. A Russian volcanologist immediately notified the Scientist in Charge in the Southern office when the volcano erupted in Russia. The Scientist in Charge in the Southern office discussed the updated information with Southern office members who were knowledgeable in analyzing satellite data, consulting with them to see if the eruption could be observed on satellite images. The extended interaction concerning the eruption was mostly between the Southern office and those extended "wall chart" agencies that needed to be notified about the eruption. A majority of members in the Northern office were not notified of the eruption in Russia until the event was over.

In a Northern office meeting, held the Tuesday following the Sunday volcanic event, a Northern member told the rest of the Northern office members that an eruption had occurred in Russia that past weekend. The Coordinating Scientist and one other Northern office member had been notified of the volcanic event in Russia. When other Northern office members asked why other members of the Northern office were not informed by the Coordinating Scientist, the response was, "The Coordinating Scientist

was busy preparing for a trip to Katmai Volcano." A Northern office member then brought up the issue of the organization having a "communication problem" because a majority of the Northern office members were not being notified of significant information. When that person asked the meeting leader why the Northern office had not been notified, he replied, "The Scientist in Charge didn't want to ruin our weekend by worrying us."

Even though the Northern office is a part of the researched organization, Northern office members are not always involved with monitoring or responding to volcanic eruptions. In Summer 1999, I asked a member of the Southern office why it appeared that many times members in the Southern office are notified immediately and the members in the Northern office are only notified later; and often much later. The Southern office member replied that, "The Southern office has its own Remote Sensing members, Seismology members, and Geology members. It is so much easier to run down the hall to those members to discuss an event than trying to catch a Northern office member by email or phone." In this situation, information is power and the issue is not only whom an organizational member knows, but where the organizational member is located in

the researched organization. This literal and figurative distance adds to the perceived feelings of "inferiority" in the Northern office and leads to the recognition and use of information as status and collateral in the power hierarchy of that office.

Feelings of inter-office inferiority affected the communication in the Northern office. Recognition that the Southern office holds the mandated power and is fully funded to do AVO work seemed to produce a "one down" atmosphere in the culture of the Northern office. By "one down" I mean that the Northern office members recognized that their entire membership is hierarchically lower than their counterparts in the Southern office. That recognition by members of the Northern office enhanced their focus on hierarchy and resulted in perceptions and interactions that reflected a viewing for power and status. The education degrees held, wall chart position, access to the most recent information, and even gender became involved in the symbolic interaction of the Northern office.

Being a member of an office that is hierarchical and male-dominated often demonstrated that I, as a woman, had more differences than similarities with most of my Northern office colleagues. The negativity in my working environment

in the Northern office became overwhelming. Every day walking into the office, I consciously made an effort to avoid certain members because I knew I would be subjected to belittling comments because I was a woman. Not only would I be subjected to belittling comments, but also to uncomfortable stares and gawking to a point at which I felt uneasy walking by their desk if they were watching me. I found my only solution was to work more with members in the Southern office. Persons in that office, I had observed, would embrace diverse viewpoints concerning crisis response issues and diverse organizational members.

In July 1998, I was assigned to time in the Southern office in order to learn about the Southern office and its members' organizational work. I was informed at an earlier date by another geologist in the Northern office that in order to see the "big picture" of the organization I should ask the Southern office if I could visit. According to the Northern office member, "everything happened," down at the Southern office. In July 1998, I was able to visit the Southern office and take part in volcanic response tasks, tasks that I would never have the opportunity to experience in the Northern office.

After being in the Southern office for two weeks, I was included in the organizational response to possible volcanic activity observed by a pilot flying over the Aleutian Islands in Alaska. After hearing about the volcanic event, I asked if I could participate. The "acting" Scientist in Charge at the time gave me the opportunity to personally speak with members of other agencies over the phone to clarify the details involving the volcanic event. While this was occurring, the Scientist in Charge was away from the Southern office on business and the acting Scientist in Charge and I worked closely together to respond to the volcanic event. A Northern office member was notified of the volcanic event, but chose not to discuss it during a phone conversation we had timely to the event horizons. Later, I confronted the Northern office member, trying to understand his motivation to not discuss the volcanic event with me. His response was, "My head wasn't with it yesterday."

After the Scientist in Charge returned from her business trip, two days after the volcanic event, she told me she was concerned about the steps I had taken in responding to the last volcanic event. The Scientist in Charge made it evident to me that I could have been

"sticking my neck out too far." She said that it is her job to talk to the agencies involved in the volcanic response and that liability was an issue because the organization could be held accountable for any misleading information given to concerned agencies about the volcanic event. I prepared a memo, including every step I had taken during the volcanic response, so she would be updated on the events and on my actions throughout the response. From my experience of being a Southern office member during that response to the volcanic event, I came to realize the extensive impact the researched organization has on the public and on affected agencies. None of my experience in the Northern office had given me any understanding of the information responsibilities of the organization beyond gathering the scientific data. I was made aware that complex issues such as liability need to be a concern. From experiencing the initial response in the Southern office, I also gained a new respect for the Scientist in Charge. I could see that she appreciated organizational members taking extra initiatives to accomplish organizational goals, but I also learned that members must do so while respecting her authority and expertise as the Scientist in Charge.

Liability, as an issue for the researched organization, is an important matter to be considered; however, during my three years in the Northern office, liability was never discussed. Northern office members are not concerned with liability issues because they are not responsible for the final decision-making nor for external agency contacts in the researched organization. To them, assessment and decision-making concerning volcano response issues do not extend beyond notification of the Southern office. Decision-making is beyond the purview of the Northern office. The Scientist in Charge (Summer, 1999), stressed to me the importance of making decisions cautiously, but in a timely manner so agencies, such as the Federal Aviation Administration, would not lose money while grounding aircraft or delaying.

Making decisions in the "heat of the moment" and not checking all possible situations are acts that could ruin the reputation of the researched organization. Later in the conversation, the Scientist in Charge discussed how important it is to be able to analyze data from a variety of disciplines:

> I have members from Remote Sensing giving me satellite data, I need to analyze the satellite data

> in correlation with the seismic data, and I also have to look at the geologic history concerning the volcano, so it is my responsibility to take into account every discipline in analyzing the volcano's status (Summer, 1999)

Since liability is only an issue for the Southern office members, there is an organizational need for one voice for the organization. The Northern office does not have the same responsibilities so Northern office voices are considered to be suggestions to crisis response, not actual solutions. This shared perception throughout the organization makes the members in the Northern office sometimes, resentful toward their "place" in the organization.

An example of the Scientist in Charge being the primary voice of the organization as well as the most informed in the organization occurred in August, 1998. The Scientist in Charge sent an email to the organization notifying members that she had received a message on her pager concerning possible activity in a certain volcano in the Alaska Peninsula. In a report to the Scientist in Charge, the Alaska Division of Emergency Services stated that there was a fire on the same volcano that had been

rumored to be showing activity. The Scientist in Charge's next step was to notify an organizational group member in the Southern office, knowledgeable in analyzing satellite data. That person informed the Scientist in Charge that no volcanic activity had been observed over the volcano in question. After including this information in the email to the members in the researched organization, she informed us that she would "do some checking" and give "everyone more information later." As the Scientist in Charge, she is prioritized as the first organizational member to be informed. She decides who else in the organization should be informed of current information about volcanic activity. Organizational members who are notified only after the initial volcanic response are interpreted in the organization as being "out of the loop," not significant, and therefore without any of the power accruing around information in the organization.

Feelings of inadequacy regarding such powerlessness are not handled quietly by many members in the Northern office. That office is a predominately male environment with scientists who have spent years of their lives researching disciplines associated with volcanology. When some members of the Northern office are sensing their lack

of information, it was my experience that those persons "scapegoat" others to maintain their organizational self-concepts. On such occasions I, and others in the organization, were at times expected to take on part of the blame for misinterpretations of satellite data or from other situations similar in nature. An example of me, as an organizational member, being positioned to take blame occurred in July, 1998 when I was working in the Southern office. A pilot's report was sent to Southern office members concerning possible volcanic activity in an area of Alaska that had not had activity for a very long time. Because the area had not been volcanically active for a very long period of time, it was more difficult to find relative satellite data, as contrasted to areas in Alaska that are more commonly active. Since the computer program guiding the satellite surveillance was not prepared to include satellite imagery of the area with potential volcanic activity, a person with more advanced computer skills was needed to generate a "master" file. Extra programming was required to instruct the computer system's satellite program to view the images of the area in Alaska that the organization needed.

At this time, I had planned to be at the Southern office for two weeks. Most of my computer notes were in the Northern office because I had planned to return to the Northern office immediately following my data gathering at the Southern location. I did not have my computer notes and I was unsure how to program the satellite to generate the "master file" that was needed. The Southern office member knowledgeable in generating a "master file" was not currently present due to an injury. I called a Northern office member who was knowledgeable in the organization's computer system. That technical office member could not be reached due to his busy schedule, so my final choice was to notify the Northern group leader in charge of satellite analysis. The group leader in the Northern office confessed that he too was without the skills to generate a "master file," so I directed him to my computer notes on his desk. The Northern group leader gave my computer notes to a summer intern to interpret, and she generated the "master file" and analyzed the satellite image of the volcano in question. After analyzing the image while I was on the phone, the summer intern determined that there was no volcanic activity observable.

After the situation was over, the group leader sounded angry on the phone and told me, "You should have assumed you were going to use your computer notes while you were in the Southern office." I told him that I had not needed to generate a "master file" in over five months. His frustration at being found in a position that required information he did not have was focused on me, as his graduate student. While he was the group leader in the Northern office, responsible for both the imaging process and the interpretation of the images, he could not assist in the computer operations necessary to create the required "master file," and, had the summer intern not been in the office at the time, the situation could have become more complicated. Had the activity been a threat to aviation or the public, his lack of skill could have affected safety issues. In an organization in which information is perceived as power, it was evident that the group leader had position power by his title, but had no real power because he did not have the appropriate information needed to respond to the volcanic crisis.

Gender

According to Wood (1997), there is a stereotype that men and women cannot work together because our Western

culture defines the sexes as "opposites." There is a tendency for members in an organization to

> run into stereotypes of women and men as sexual or romantic partners . . . and this leads some people to think men and women are so focused on each other as romantic or sexual beings that they cannot work together as colleagues. (p. 361)

In the Northern office, where satellite tracking data is observed, there were three male group members and myself. As a woman working in a male-dominated environment, the situation for me was often exhausting. I was not recognized as a scientist, working toward similar organizational goals. Biological difference was interpreted as social distance by members. And even where I sat, in a small cubicle in the middle of a laboratory in the Northern office, the position was arranged in regard to my perceived difference from male members of the organization.

An example of gendered based interaction occurred in October, 1998. The building in which the organization is housed was in the process of having another structure built adjacent to it. Ultimately, this would mean that some of the organization's offices would be moved next door. Members who are responsible for monitoring satellite data

for the organization were moving to another floor, which meant that all the members in this group had to stake claim to their new territory, a significant matter in the status-consciousness of the researched organization.

The final decision on appropriation of space was that the group leader would have the largest office, the group member with a postdoctoral degree would get the second largest office, but would have to share his office with one of the graduate students. I had already determined that I would be in the laboratory and not in an office because I was not working on my postdoctoral degree, like the other graduate student in the Northern office group. In an elaborate justification, however, I was told that my degree work was not the reason that I would not be in an office. The group member allocated the second largest office informed me that he requested to share office space with the other graduate student because of how I looked physically: "Well hey, what would my wife think if I shared an office with a pretty girl?" Unprepared for such overt sexism, I responded saying neither my gender nor appearance should be an issue. Based on my personal embodiment, I was bothered that I was being perceived and treated differently in the organization. I was praised for the quality of my

organizational participation, I had accomplished research, but decisions about my "fit" in the organization were being made primarily on my gender and my personal embodiment.

Notes in my research journal describe events occurring in the Northern office that continued to relate to my physical appearance rather than my work. At one time during my experience at that office, I had gone to my group leader to discuss progress on a research project I had been working on for quite awhile. When I was attempting to discuss research issues with him, he continually interrupted me to discuss my physical appearance. He would interrupt, for instance, with comments such as "Have you been tanning?" My perception was that my tan was not an issue to be discussed in his office and the focus should have been work-related issues, such as my research.

Conversations that were conducted in the male-dominated environment of the Northern office became quite disturbing as I realized I was being stereotyped in the immediate organization as "female;" that is, "other." A member of my research group told me that he was going to take out a male colleague, a new professor in the Northern office, since he was new in town. The colleague who was entertaining the professor asked me if there was any place

he could go to find the new professor a date. I told him I did not know of any respectable places in town. "I want to get the new professor someone so he won't be alone," he said. My interpretation of this conversation was that for a male scientist, a woman needed to be present in his life to balance his workload. In my mind, I wondered if my colleague merely saw women as convenience; as entertainment"things" to be owned.

In my research notes, I discuss a conversation with a female member from another group in the Northern office. She told me she was annoyed by how this same colleague described his wife. He calls her "the wife." My female colleague questioned his perceptions of women based on how his language framed perceptions of his lifetime female partner.

Throughout the time I had worked with this organizational member, he had gone out of his way to "fill me in" on past "male outings" with volcanologists from other organizations. While discussing a volcanologist from another organization the group member called him a "bit of a wanker," but said that he did help the other volcanologist "get laid once." This person continued by bragging about his way "with the women." "I could have had

[the woman] that he (volcanologist from the other organization) got," he went on, "but I didn't want her so I gave her to him"(October, 1998). He was oblivious to the fact that I felt his experiences during his own time outside of the organization were not my business, and that his conversation was not appropriate for the organizational setting. This was typical of the organization and typical, too, of male members in a male-dominated working environment not respecting members who are of a different sex. Speaking of issues such as "getting laid" and the women "he could get" is deliberately putting me, as a woman, in an uncomfortable position. He finds no issue in demonstrating that he perceives me as a sexual being, rather than his research colleague.

I experienced inappropriate questions and conversations regularly in the Northern office. I also observed inappropriate and unnecessary measures of allocating power based on gender. In January, 1999, all Northern office members with knowledge in monitoring satellite data were going to be gone for a week except a male graduate student working on his Ph.D. in Geology and Geophysics, and myself. The leader of the group responsible for monitoring satellite data sent an email to all members

of the organization stating that his group would be gone with the exception for two graduate students. With only two graduate students remaining in the laboratory, one male and one female, the group leader made it clear that the male graduate student would be lead; meaning that all final decisions concerning satellite data would be made by the male graduate student, and not myself. After sending the memo, the leader of the group came to me and asked if I had a problem with the email. His action of coming to my desk and asking if I had problem demonstrated that he was aware of belittling me based on my gender. He attempted to justify his sexist decision by noting that the male graduate student's degree was to be in Geology and Geophysics and my degree would be in Communication, and that the decision had not been made based on knowledge or experience in satellite monitoring. Degrees to be attained by the male gradate student and I clearly had nothing to do with his decision. In the group leader's view, I was not perceived as having the "tools" to be a leader because of my gender. He had made it clear to me in the beginning of my graduate program that he believed women do not make good supervisors. His actions toward me on this occasion reflected his previously stated, sexist opinion of women in

the work place. When the male graduate was labeled as the lead scientist over myself, the Northern office group leader distinguished the differences between the male graduate student and me, and did not focus on what commonalties we had as a team.

Other behaviors by my Northern office group leader that distinguished gendered differences between other members and myself occurred quite often. To my embarrassment as a member, such behavior was not always confined to the Northern office, but occurred also in front of organizational members from outside the Northern office group. In January, 1999, two organizational members (not members of the Northern office group) the Northern group leader, and I were in the leader's office, discussing day-to-day activities in the organization. I had always wanted the opportunity to teach, so I asked the group leader if I could teach an entry level Geology laboratory class to acquire some teaching experience. The group leader replied that, because my degree would be in social science rather than Geology, I would be his "last resort." I asked another organizational member who was present in the interaction if I could be his teaching assistant, since the group leader did not want me. The other organizational

member replied that he would like to have me as his teaching assistant and asked me what I planned to do with my degree once it was complete. I replied with what I had been considering doing after I graduate. Before I could finish my response the group leader overspoke me saying, "What do you mean, I thought you were going to get married and become a housewife?" His intended humor implied that, since I was a female, obviously my education would not be the basis of a professional career. In responding to me based on my gender, the group leader displayed the stereotypical perceptions of male members of scientific organizations about the expectations of women as productive colleagues. His focus was not on my career interests, not on professional opportunities for my field of study, but on the outdated expectations of my "womanly" duties as anticipated by a modernist culture. His display, presented as humor, was doubly ironic. In interrupting me, he had already dismissed me and what I might have to say. By couching this dismissal in gendered terms, he tried to show his awareness of difference in an era of harassment. His "tease" however, displayed his ignorance of me, of real gender tensions in his own organization, and of his own lack of awareness.

On another occasion I had confronted my group leader on how I had been treated by another group member and told him it had been inappropriate. He responded with the question: "Did he touch you?" I was baffled by this response, but I told him "no." He replied, "Then don't worry about it. Just say a smart ass comment back" (1998). In that this had exemplified my leader's ignorance of an inappropriately gendered environment, I knew from this point of our interaction, that I would not be protected from sexual harassment and that I would have to fend for myself if group members were going to belittle and harass me.

In a subsequent discussion with the person who agreed to have me be his teaching assistant, I mentioned that I did not appreciate how I had been treated. That person agreed that I had been belittled and that his perception of the Northern office was that it was like "living in the 1950's" in regard to how that office's group members "do things" (handle diversity in the work place).

According to Wood (1997), approximately half of women working outside of the home are employed in clerical jobs or service oriented positions. It is very rare for women to work in positions involving the physical sciences and the

male-dominated work environment can prove a difficult adjustment for women who attempt to do so.

In the Northern office's copy room, I had a talk with another female organizational member who is also part of another organizational group. I asked her how her work was going and if she was getting ready for the summer (fieldwork season, 1999). She looked frustrated and said,

> I feel left out of the loop and I'm given these meaningless jobs. I really hope I can get out into the field because I can carry a battery just as well as these middle-aged guys! [They] told me about all of these great projects and money I'd get working here as a research assistant. [They] didn't tell me the money included my stipend for classes. I thought I was getting $1200.00 a month and I'm only getting $800.00. (Spring 1999)

This female graduate student had been led to believe that she would be taking part in challenging research projects and would be treated as an equal member of her research group. Instead, she felt belittled that she had been lied to concerning the support promised before she made the commitment of working in that office.

My group leader had a similar perception of me and assigned me duties that were not under my job description as a research assistant in satellite monitoring. In April 1999, a female scientist from the Southern office was flying up to the Northern office to visit. My group leader asked me if I would pick her up at the airport. After I agreed to run his errand he said, "I don't want you to think I'm treating you like a secretary. I've just been up since 5 a.m. this morning." My interpretation was that his giving me errands to do was acceptable, in his mind, and justified by his busy work schedule. My group leader's facetious comment, which in effect positioned me as his secretary, was inappropriate. Secretarial work was never any part of my job description. As the research shows, even women who do not have a job that involves secretarial duties, "are asked to take care of social activities on the job, but men in equivalent positions are seldom expected to do this" (Wood, 1997,p. 63).

As I observed behavior in this particular group in the Northern office, I realized that the reason I was perceived as a secretary was because Northern office members had specific perceptions of women. Another example of this particular group's perceptions of women is not in my field

notes, but is indelibly a memory of the time when I first became a member of the organization, in 1998. I had confided in my group leader that I had experienced at one time in a former position difficulties in communicating with a supervisor. That supervisor happened to be a woman, but my difficulties were not because she was a woman; but because of her lack of competent communication skills. My AVO group leader dismissed the fact that my past supervisor was a poor communicator and perceived the problem as being a product of her gender. "Well Shelly," he informed me, "women do not make good supervisors." I was a new member of the organization at that time. I felt uncomfortable rejecting my group leader's comment because I was afraid I would not be considered a team member of the workplace.

After hearing my group leader's comment, I asked myself, "What is my group leader's perception of an 'appropriate' woman scientist if in his mind, women, cannot be good supervisors?" In April, 1999, my understanding of what an "appropriate" woman would be to him was clarified when he complimented a female colleague while I was in the office with him. He said, "(This certain female colleague) is a really nice lady. She's very mild mannered." After hearing this comment from my group leader, I viewed his

perception of an "ideal" woman as being submissive and easily controlled.

There were common interactions that displayed perceptions of women in the researched group where I spent most of my time as a member. In my field notes, I discuss an interaction that occurred between a group member and me concerning feminist issues. This male member seemed annoyed with women who portray themselves as feminists, and in no way would he embrace the equality of women. His annoyance with feminism occurred when he sent an email to members of the organization and included the term, "man made" in his description of a structure. A female scientist replied to the group member's email by informing him the term "man made" was an inappropriate term to use when describing a human constructed structure. He concluded to me that, "(This female scientist) takes this feminist thing way too far." In my data describing interaction with this member, I noted terms from him describing certain female scientists as "feminist Nazis." In confiding his sexist views to me, this action seemed to reflect his expectation that, because I do not embody his view of a "feminist" self-presentation, I must agree with his view.

Female scientists other than myself have noted this anti-female behavior that characterizes some of the group members' perceptions of female scientists. A female colleague was informed that I was going to do research at the Southern office.

> Gosh Shelly . . . being treated like a person? Sounds great. I just don't know about this place sometimes. I feel a lot of resentment towards it at times. I need to learn to be more assertive and not worry so much about hurting people's feelings. (Her supervisor) is frustrating because either he's really sneaky or he honestly doesn't understand why I think (this project) . . . is a waste of time. (June, 1999)

This female colleague found it difficult to voice her opinion on a project. Because of her lack of aggressiveness in expressing her opinion, it was unlikely for her to be heard in that office, and to complete the double-bind, she felt that had she been aggressive, she would be interpreted as "pushy" and "not a team player."

Other classic female stereotyping in the organization was regularly evident. Women being treated stereotypically subordinate, regardless of their organizational position, occurred by example in February, 1999. My group leader had

forgotten to finish a task at work. Even though there were members other than myself in the laboratory at the time, he came to me to remind him to finish his task. He said, "help me remember to do that." Obviously his perceptions of a woman's "place" involved the stereotypes of women in the home as the ones to help "the man" remember to do things. The nurturer stereotype of women was applied well beyond the situation of a relational "helpmate."

Not only did my group leader perceive women through modernist stereotypes, he also perceived women as indecisive and difficult to understand. His way of dealing with this perception seemed to be through communicating his confusion at changes in society with sexist comments. In my journal, I noted interaction, in my presence, where my group leader had associated volcanic activity with women. He proclaimed, "This volcano has been unpredictable; just like a woman." The group leader's sexist interpretation of women was a consistent matter in my experience with him and he even found ways to relate these sexist issues with organizational goals.

Another example of his bringing sexist perspectives to everyday interaction occurred in September 1998. I was interested in researching hazard response and discovered a

case study involving organizational response to an earthquake in Afghanistan. I informed my group leader of the case study because I was interested in doing something similar for a research project. Instead of commenting on the case study content, his "informed" focus was instead the treatment of women in Afghanistan. He compared the treatment there to that of women in Western culture. Facetiously, my group leader asked, "You know about Afghanistan don't ya?" I was confused at this abrupt redirection of the interaction so I asked, "What do you mean?" He continued saying, "You know how they treat women there? They belittle women. Women can't have one ounce of flesh to the sun. You wouldn't like living there, would you?" (September 1998). My reason for discussing the case study was for research purposes. Afghanistan's social treatment of women had nothing to do with the context of our conversation. Such continuous topic shifts and reveal his confused perceptions of women. This type of interaction from my superior and group leader became so frequent, finally, that it began to affect my ability to do my job.

Summary

The researched organization is differentiated both through the organization's physical structure and the human

interaction that takes place in the organization. Even though the organization structure is quite defined by its legal documentation, the interaction that occurs between the two physical locations of the organization is not so defined. What is perceived in observing the organization's wall chart is not a clear representation of organizational communication. Many matters detract from the anticipated organizational communication and culturally disrupt the organization's mission in the exchange and use of information.

Inferiority perceptions in the Northern office of the organization result from both location and power. Organizational members who have updated information, usually members of the Southern office, are perceived as having power and control in the organization. Information possession and use in turn is related to the organization's mission and the differentiated goals that are assigned to each of the two offices. In the Northern office culture members who are socialized to attend matters of status and hierarchy use possession of organizational information as collateral to demonstrate personal status. Along with degrees, offices, and other forms of status signs, information becomes interpersonal rather than

organizational thus creating a potentially dangerous situation. Such use of significant information is at the very least a consumption of time better spent in research. The delay such handling of information might produce in a crisis situation could impact seriously on lives and property.

There are two cultures in AVO. Both have unique interpretations of how members participate both organizationally and culturally. Members perceive themselves first through location in the organization, and further in regard to their relation to the organization's mission. Members of the Northern office demonstrate competitive behavior based on perceived organizational status.

Since environment in the Northern office is male-dominated, unlike the Southern office, treatment concerning a member's gender is an extension of the status issue that further differentiates the two cultures in the organization. Differential treatment due to gender in one office in the organization, but not the other, emphasizes that the two cultures in this organization are perceived differently by members. Those perceptions, in turn, produce different working environments even though both offices are

considered to be parts of one organization. According to Truskie (1999), the differentiated characteristics of each of these offices anticipate moderate conflict when working toward organizational goals, because cooperative environments and individualistic environments do not function in a complementary manner.

Chapter 4

Conclusion

The Alaska Volcano Observatory is an organization created and bound by a legal document, the Memorandum of Understanding. In creating an organization that includes both two distant locations and two governing structures, the document laid a groundwork for the organization differentiating into two sub-cultures. While the Northern and Southern offices are coherent in objectives and work toward similar goals, the communication practices in each office are evidence of a clear contrast between the two. Communication in the Northern office reflects perceptions that are characteristically "modern," while communication in the Southern office might be characterized as "postmodern."

The Northern office is typical of what is described in the organizational communication literature of the modern era. It is a white, male hierarchy in which members are overtly conscious of status represented in both position and material possession. Educational degrees, office space, and access to the most current volcanic data figure heavily into relational and status positioning and posturing. Not surprisingly, the Northern office reflects

the typicality described in the literature of women in science. The stereotypical treatment of women in modern society continues virtually unchanged in scientific organizations and particularly in departments of Science on University campuses. The perceptions and communicative actions of Northern office members reflect and continue to construct a one-upsmanship among its male members and a second-class social space for women. Because actual organizational power resides in the Southern office and with Southern office members, regard for power and vying for the trappings of power are enhanced and exaggerated in the Northern office.

The Southern office, perhaps because it has been run as a collaborative organization by the long-time Scientist in Charge, a woman, or perhaps because its members' power is constituted in the founding document, does not have the same communicative atmosphere. Respect for both personhood and expertise permeates the interaction in the Southern office.

After gathering information over two years of ethnographic research, I have found three conceptual foci that characterize the Northern office. In both language and interactional practices, Northern office members

communicate a perception of inferiority in regard to their relationship to the counterpart organization and members of the Southern office. This "inferiority complex" of the Northern office organization then leads to a recognition of both actual and perceived differences in the organizational offices and their members. Actual differences in power and authority are mandated in the founding document. That document plays little or no part in the perspectives of Northern office members. Instead, a sort of organizational petulance is constructed more stereotypical to "step-children" than to scientific organizations. The "one-upsmanship" inherent in actual power structures in the Northern office becomes a kind of competition among members. In a situation where a person with a lower academic degree holds organizational position power over persons with higher academic degrees, the already competitive atmosphere is enhanced.

Set in this atmosphere, access to and interpretation of pertinent geological data become matters of status, power, and the male game of competitive one-upsmanship. Information flow and the use of information as collateral are involved in the power game of the Northern office.

Finally, I have been struck by the parallels between being a female in the organizational culture of the Northern office and news articles about girls wanting to play football. Either access is simply denied, or strong discouragement is given in the communicative practices of males who fear the demystification of male places. Women are not even allowed to compete. What has often been interpreted as harassment, as postmodern concepts are used to address modernist realities, is simply men already stressed by their own constructions of competitiveness seeing entirely new forms of competition, changes to sacred rule systems, and a wave of new competitors.

The first concept discussed is an overlying description of the organization that has contributed to the underlying forms of communication conflict in the organization. This manifests in the perceptions and interactions of members as a sense of inferiority members of the Northern office feel in regard to the Southern office. A sense of inferiority in the Northern office is due to the lack of authority the members in the Northern office have in making decisions for the organization. According to Truskie (1999), there is differentiation in the organization by product because there are "groups that

differentiate themselves in terms of the basic 'technology' they employ" and if the frequency to which the members in the organization interact with the public and to other agencies (p. 100). Another reason the members in Northern office experience perceptions of inferiority to the members in the Southern is because Northern office members are socialized to approach member relationships in regard to achievement. The achievement culture involves viewing status with "individual accomplishment" unlike the culture with the members in the Southern office (Truskie,1999, p. 100). Members in the Southern office have a cooperation culture's team approach because these members "attempt to develop a relationship of peace and harmony" (p. 100). According to Truskie (1999), when an office with a cooperation culture and an office with an achievement culture interact, there is a moderate level of conflict inherent because the individuality of achievement with the members in the Northern office will moderately oppose the team approach of cooperation between members in the Southern office.

A second concept derived from the data is the phenomena of information as power. One of the goals in the organization is to disseminate updated information to the

public and other agencies about volcanic activity. If organizational members are not informed of updated information then in their view, their status in the organization is questioned.

Since information is perceived first as power in the Northern office members will at times withhold information from members or only pass selected members the information. Withholding or only informing selected members is a way to exhibit and direct power in the organization. Being informed on updated events in this organization defines for Northern office members who is significant.

According to Kramer & Neal (1998), information, when treated as power in the organization, is enacted through social influence of the members. Updated information given to other members is accepted as "evidence about reality" (Deutsh & Gerard in Kramer & Neal, p. 189). Information influences what organizational members believe and influences issues such as "truth-telling, honesty, deceit, lying, concealment, and disclosure" between members in the organization (p. 189). Organizational members informed before other members have the power to decide how and when they are going to inform other members in the organization. In this organization, members in the Southern office have

the power to decide what information is going to be reality for members in both the Northern and Southern offices.

The third organizing concept that emerged from my data concerned a more specific characteristic in the Northern organization: gender. Gender is treated differently in each of the office sub-cultures. The culture in the Southern office is a cooperative environment embracing members of both genders, but the culture in the Northern office is based on achievement and is focused on individualistic goals. This achievement culture is also male-dominated and only perceives differences between organizational members; not commonalities. Due to this characteristic in the Northern office, female members are constantly reminded of their differences as male members in this male-dominated office create a one-down social space for women.

Although this organization is bound by a legal document, the Memorandum of Understanding, there is still substantial evidence of two sub-cultures in this organization. The memorandum links the two offices by defining a list of goals that both of these offices must address for funding. The offices, however, are still differentiated by geographic location and the responsibilities designated each of the offices. Given the

organizational requirement for these two sub-cultures working together, according to Truskie (1999), there will continue to be at least a moderate level of conflict in this organization.

References

Alasuutari, P. (1998). An invitation to social research. London: Sage Publications.

Arliss, L. (1991). Gender communication. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.

Bate, B. & Bowker, J. (1997). Communication and the sexes. Prospect Heights, Ill: Waveland Press Inc.

Bryman, A. (1991). Street corner society as a model for research into organizational culture. In P. J. Frost, L. F. Moore, M. R. Louis, C. C. Lunberg, & J. Martin (Eds.) Reframing organizational culture. London: Sage Publications.

Coffey, A. (1999). The ethnographic self. Thousand Oaks, California: Sage Publications.

Cronin, C., Roger, A. (1998). Theorizing progress: Women in science, engineering, and technology in higher education. Journal of Research in Science Teaching, 36, 6. 637-661.

Daniels, T. & Spiker, B. (1994). Perspectives on organizational communication. Madison, Wisconsin: Brown & Benchmark Publishers.

Deutsch, M. & Gerard, H. B. (1958). A study of normative and informational social influence upon

individual judgment. Journal of Abnormal and Social Psychology, 51, p. 629-636.

Dingwall, R. (1997). Context and method in qualitative research. London: Sage Publications.

Geophysical Institute of the University of Alaska Fairbanks, Alaska Division of Geological and Geophysical Surveys, & United States Geological Survey (1988). Memorandum of Understanding. A document establishing an Alaska Volcano Observatory.

Gregory, K. L. Native view paradigms: Multiple cultures and culture conflicts. Administrative Science Quarterly,28. 359-376.

Halim, N. S. (1999). More rewards could bolster retention of women scientists. The Scientist, 13, 23. 1-10.

Jorgensen, D. L. (1989). Participant observation: Methodology for human study. Thousand Oaks, California: Sage Publications.

Lips, H. (1991). Women, men, and power. Mountain View, California: Mayfield Publishing Company.

Littlejohn, S. (1996). Theories of human communication. Belmont, California: Wadsworth Publishing Company.

Marshall & Rodman (1995). Designing qualitative research, Thousand Oaks, CA: Sage Publications.

Martin, J. (1991). A personal journey: From integration of differentiation to fragmentation to feminism. In P. J. Frost, L. F. Moore, M. R. Louis, C. C. Lunberg, & J. Martin (Eds.) Reframing organizational culture. London: Sage Publications.

Martin, J. & Meyerson, D. (1998). Women in power: Conformity, resistance, and disorganized coaction. In R. M. Kramer & M. A. Neal (Eds.)Power and influence in organizations. London: Sage Publications.

Mohan, M. (1993). Organizational communication and cultural vision: Approaches for analysis. Albany, NY: State University of New York Press.

Mueke, M. A. (1994). On the evaluation of ethnographies. In J. M. Morse (Eds.) Critical issues in qualitative research methods. London: Sage Publications.

Mumby, D. (1994). Communication and power in organizations: Discourse, ideology, and domination. Norwood, NJ: Ablex Publishing Corporation.

Munoz, F. A. C. (1996, February). Communication of volcanic risk to diverse populations. Paper presented at

the annual meeting of the Western States Communication Association, Pasadena, California.

Reskin, B.& Padavic, I. (1994). Men at work. Thousand Oaks, CA: Pine Forge Press.

Smith, D. E. (1973). The social construction of documentary reality. Sociological Inquiry, 4. 257-268.

Truskie, S. D. (1999) Leadership in high performance organizational cultures. London: Quorum Books.

United States Geological Survey, Alaska Division of Geological and Geophysical Surveys, Geophysical Institute at the University of Alaska Fairbanks (1997, May). Alaska interagency operating plan for volcanic ash episodes. Document created to organize communication during volcanic crises.

Wood, J. (1997). Gendered lives: Communication, gender, and culture. Albany, NY: Wadsworth Publishing Company.